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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,543	01/12/2004	Jac-Bon Koo	6161.0124.US	9288
58027 7590 08/09/2007 H.C. PARK & ASSOCIATES, PLC 8500 LEESBURG PIKE SUITE 7500 VIENNA, VA 22182			EXAMINER ERDEM, FAZLI	
			ART UNIT 2826	PAPER NUMBER
			MAIL DATE 08/09/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/754,543

Applicant(s)

KOO ET AL.

Examiner

Fazli Erdem

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,6-11,24 and 32-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2,6-11,24 and 32-37 is/are allowed.
- 6) ☒ Claim(s) 38-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

JP05-323361 reference is also included because examiner thinks it is relevant in terms of switching/driving transistors with different channel thicknesses.

#### **Examiner Comment**

For clarity, in claim 1, applicant is urged to define “a switching thin film transistor” and “other thin film transistor” by adding more definitive language before paragraph starting “wherein a thickness”. Although, as currently stands, “a switching thin film transistor” does not warrant a 112 rejection, applicant is urged to have a separate line prior to paragraph 3 in claim 1, defining what “switching transistor” and “other thin film transistor” are.

#### ***Allowable Subject Matter***

1. Claims 1, 2, 6-11, 24, 32-37 allowed.
2. The following is a statement of reasons for the indication of allowable subject matter:  
Regarding Claims 1, 2, 6-11, 24, 32-37, prior art failed to establish driving and switching thin film transistors with different grain size active/channel layer and different thickness active/channel layers.

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 38 and 40 rejected under 35 U.S.C. 102(e) as being anticipated by Yamazaki et al. (6,828,951).

Regarding Claim 38, in Fig. 16 and column 29, Yamazaki et al. disclose a flat panel display, comprising: a light emitting device; and at least two or more thin film transistors 730/731 including semiconductor active layers 863/864/865 having channel regions, wherein a thickness of the channel regions of the thin film transistors are different from each other, and wherein the thin film transistors include a switching thin film transistor for transmitting a data signal, and a driving thin film transistor for operating the light emitting device so that a predetermined current flows in the emitting device according to the data signal, and where the thickness of the channel region of the switching thin film transistor 730 is thinner than the thickness of the channel region of the driving thin film transistor 731 (column 29, lines 49-58).

Regarding Claim 40, in Fig. 16 and column 29, Yamazaki et al. disclose a flat panel display, comprising: a light emitting device; and at least two or more thin film transistors 730/731 including semiconductor active layers 863/864/865 having channel regions, wherein a thickness of the channel regions of the thin film transistors are different from each other, a pixel area (all the way to the right) controlling a signal applied to the pixel area, circuit area (the middle portion) and wherein the thin film transistors include a circuit thin film transistor for transmitting a data signal, and a pixel thin film transistor for operating the light emitting device so that a predetermined current flows in the emitting device according to the data signal, and where the thickness of the

channel region of the circuit thin film transistor 730 is thinner than the thickness of the channel region of the pixel thin film transistor 731 (column 29, lines 49-58).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 39 rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al. (6,828,951) in view of Takano et al. (6,201,585).

Regarding Claim 39, in Fig. 16 and column 29, Yamazaki et al. disclose a flat panel display, comprising: a light emitting device; and at least two or more thin film transistors 730/731 including semiconductor active layers 863/864/865 having channel regions, wherein a thickness of the channel regions of the thin film transistors are different from each other. Yamazaki et al. fail to disclose the required different active layer/channel thicknesses for the TFTs for each color sub/pixels. However, Takano et al. disclose an electronic apparatus having thin film transistors where in Fig. 3, red, green and blue color sub-pixels are disclosed. Furthermore, in columns 5 and 6, Takano et al. disclose that the sub pixel/colors could be driving with thin film transistors having different active layer/channel thicknesses.

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It would have been obvious to one of having ordinary skill in the art at the time the invention was made to include the required sub-pixel driving TFT channel/active layer thickness in Yamazaki et al. as taught by Takano et al. in order not to create crosstalk as disclosed in column 5 lines 50-55.


### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fazli Erdem whose telephone number is (571) 272-1914. The examiner can normally be reached on M - F 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sue Purvis can be reached on (571) 272-1236. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FE

  
SUE A. PURVIS  
SUPERVISORY PATENT EXAMINER